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Agricultural biotechnologies in developing countries and their possible contribution to food security

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Abstract:

Latest FAO figures indicate that an estimated 925 million people are undernourished in 2010, representing almost 16% of the population in developing countries. Looking to the future, there are also major challenges ahead from the rapidly changing socio-economic environment (increasing world population and urbanisation, and dietary changes) and climate change. Promoting agriculture in developing countries is the key to achieving food security, and it is essential to act in four ways: to increase investment in agriculture, broaden access to food, improve governance of global trade, and increase productivity while conserving natural resources. To enable the fourth action, the suite of technological options for farmers should be as broad as possible, including agricultural biotechnologies. Agricultural biotechnologies represent a broad range of technologies used in food and agriculture for the genetic improvement of plant varieties and animal populations, characterisation and conservation of genetic resources, diagnosis of plant or animal diseases and other purposes. Discussions about agricultural biotechnology have been dominated by the continuing controversy surrounding genetic modification and its resulting products, genetically modified organisms (GMOs). The polarised debate has led to non-GMO biotechnologies being overshadowed, often hindering their development and application. Extensive documentation from the FAO international technical conference on Agricultural Biotechnologies in Developing Countries (ABDC-10), that took place in Guadalajara, Mexico, on 1-4 March 2010, gave a very good overview of the many ways that different agricultural biotechnologies are being used to increase productivity and conserve natural resources in the crop, livestock, fishery, forestry and agro-industry sectors in developing countries. The conference brought together about 300 policy-makers, scientists and representatives of intergovernmental and international non-governmental organisations, including delegations from 42 FAO Member States. At the end of ABDC-10, the Member States reached a number of key conclusions, agreeing, inter alia, that FAO and other relevant international organisations and donors should significantly increase their efforts to support the strengthening of national capacities in the development and appropriate use of pro-poor agricultural biotechnologies.

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Resource Description

Communication: M

resource focus on research or methods on how to communicate or frame issues on climate change; surveys of attitudes, knowledge, beliefs about climate change

A focus of content

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Review

Resilience: M

Communication Audience: M audience to whom the resource is directed Policymaker **Exposure:** 🛚 weather or climate related pathway by which climate change affects health Food/Water Security Food/Water Security: Agricultural Productivity Geographic Feature: M resource focuses on specific type of geography None or Unspecified Geographic Location: M resource focuses on specific location Global or Unspecified Health Co-Benefit/Co-Harm (Adaption/Mitigation): □ specification of beneficial or harmful impacts to health resulting from efforts to reduce or cope with greenhouse gases A focus of content Health Impact: M specification of health effect or disease related to climate change exposure Malnutrition/Undernutrition Intervention: M strategy to prepare for or reduce the impact of climate change on health A focus of content mitigation or adaptation strategy is a focus of resource Adaptation Population of Concern: A focus of content Resource Type: M format or standard characteristic of resource

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capacity of an individual, community, or institution to dynamically and effectively respond or adapt to shifting climate impact circumstances while continuing to function

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Timescale: M

time period studied

Time Scale Unspecified